



STATE OF NEW MEXICO
 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
 OIL CONSERVATION DIVISION

GARREY CARRUTHERS
 GOVERNOR

June 25, 1989

POST OFFICE BOX 2088
 STATE LAND OFFICE BUILDING
 SANTA FE, NEW MEXICO 87504
 (505) 827-5800

Mr. Ernest L. Padilla
 Padilla & Snyder
 Attorneys at Law
 Post Office Box 2523
 Santa Fe, New Mexico

Re: CASE NO. 9666
 ORDER NO. R-8951-A

Applicant:

Bill Fenn, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced
 Division order recently entered in the subject case.

Sincerely,

Florene Davidson

FLORENE DAVIDSON
 OC Staff Specialist

Copy of order also sent to:

Hobbs OCD x
 Artesia OCD x
 Aztec OCD

Other Michael Hedrick, Owen Lopez

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 9666
ORDER NO. R-8951-A

APPLICATION OF BILL FENN, INC.
FOR AN UNORTHODOX GAS WELL
LOCATION AND DUAL COMPLETION,
EDDY COUNTY, NEW MEXICO

NUNC PRO TUNC ORDER

BY THE DIVISION:

(1) It appearing to the Division that Order No. R-8951 dated June 16, 1989, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED THAT:

(1) Finding Nos. 9, 10 and 11 on pages 2 and 3 of said Order No. R-8951 be and the same are hereby amended to read as follows:

"(9) The proposed 16.23% production penalty submitted by the applicant takes into consideration that Section 7 is an irregular section containing 617.68 acres which proportionately reduces its acreage participation to approximately 97% of a standard section; the subject well has a drainage of approximately 100.27 acres outside its permitted drainage area, more than the well located at the nearest standard gas well location within the unit, being 1650 feet from the North and East lines (Unit G) of said Section 7."

"(10) The proposed 16.23% production penalty is reasonable and appropriate."

"(11) The aforesaid production limitation factor should be applied against the well's monthly allowable as set by the Division for both the Indian Basin-Upper Pennsylvanian Gas Pool and the Indian Basin-Morrow Gas Pool; this may be accomplished by assigning said well an acreage factor of 0.8377 (100% minus 16.23% is equal to 83.77%)."

(2) Decretory Paragraph No. (4) on page 4 of Order No. R-8951 be and the same is hereby amended to read as follows:

Case No. 9666

Order No. R-8951-A

Page No. 2

"(4) Said well is hereby assigned a production limitation factor of 0.8377 in both of the aforementioned pools to be applied as set out in Finding No. (11) of this order."

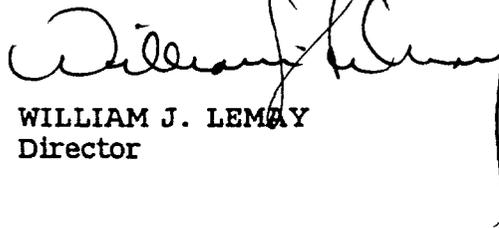
(3) The corrections set forth in this order be entered nunc pro tunc as of June 16, 1989.

DONE at Santa Fe, New Mexico, on this 21st day of July, 1989.



S E A

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "William J. Lemay", written over the typed name and title.

WILLIAM J. LEMAY
Director

PADILLA & SNYDER

ATTORNEYS AT LAW

200 W. MARCY, SUITE 216

P.O. BOX 2523

SANTA FE, NEW MEXICO 87504-2523

ERNEST L. PADILLA
MARY JO SNYDER

FAX 988-7592
AREA CODE 505

(505) 988-7577

July 13, 1989

HAND-DELIVERED

New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

ATTENTION: Michael E. Stogner, Hearing Examiner

Re: Application of Bill Fenn, Inc. for
an Unorthodox Gas Well Location and
Dual Completion, Eddy County, New
Mexico.; Oil Conservation Division
Case No. 9666; Order No. R-8951

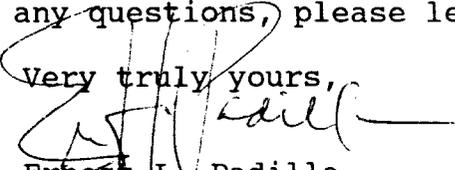
Dear Mr. Stogner:

Pursuant to our recent conversation regarding the issuance of the above referenced Order, I enclose herewith a proposed Nunc Pro Tunc Order for your further handling.

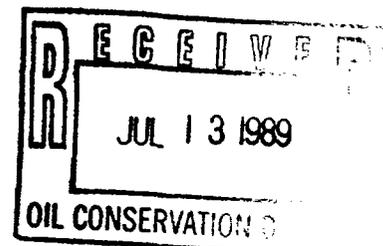
In particular, Findings 9, 10 and 11, and Decretory paragraph No. 4 assign a production limitation factor of 0.78. If I understand from our conversation, the Division applied a factor of 93% to reduce our proposed penalty as a result of an irregular Section containing approximately 617 acres. Our proposed 16.23% penalty already had taken into consideration the reduced acreage in the section and none of the parties at the hearing objected to that proposed penalty.

Should you have any questions, please let me know.

Very truly yours,


Ernest L. Padilla

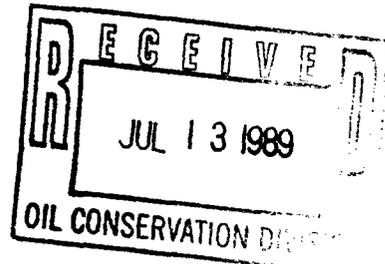
ELP:njp
Enclosures as stated
cc: Owen Lopez, Esquire (w/encl.)
Musselman, Owen & King
Operating, Inc. (w/encl.)
Bill Fenn, Inc.
U. S. Operating



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

CASE NO. 9666
ORDER NO. R-8951

APPLICATION OF BILL FENN, INC.
FOR AN UNORTHODOX GAS WELL
LOCATION AND DUAL COMPLETION,
EDDY COUNTY, NEW MEXICO



NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-8951 dated June 16, 1989, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED THAT:

(1) Finding Nos. 9, 10, and 11 on pages 2 and 3 of said Order No. R-8951 be and the same are hereby amended to read as follows:

"(9) Exhibits 9 and 9a submitted by applicant showed that the proposed 16.23% production penalty takes into consideration that Section 7 is an irregular section containing 617.68 acres which proportionately reduces its acreage participation to 96.5125% of a standard section; the subject well has a drainage of approximately 100.27 acres outside its permitted drainage area, more than the well located at the nearest standard gas well location (1650 feet from the North and East lines) Unit G of said section within the unit."

"(10) The proposed 16.23% production penalty is reasonable and appropriate."

"(11) The aforesaid production limitation factor should be applied against the well's monthly allowable as set by the Division for both the Indian Basin-Upper Pennsylvanian Gas Pool and the Indian Basin-Morrow Gas Pool; this may be accomplished by assigning said well an acreage factor of 0.8377 (100% minus 16.23% is equal to 83.77%)."

Case No. 9666
Order No. R-8951
Page - 2

(4) Decretory paragraph on page 4 of Order No. R-8951 be and the same is hereby amended to read as follows:

"(4) Said well is hereby assigned a production limitation factor of 0.8377 in both of the aforementioned pools to be applied as set out in Finding No. (11) of this order.

(5) The corrections set forth in this order be entered nunc pro tunc as of June 16, 1989.

DONE at Santa Fe, New Mexico, on this _____ day of July, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

Case No. 9666
M.S.

CASE NO. 9143
Order No. R-8508

APPLICATION OF AMERIND OIL COMPANY FOR
AN UNORTHODOX LOCATION FOR A WELL
TO BE DRILLED 330 FEET FROM THE SOUTH
LINE AND 1980 FEET FROM THE WEST LINE
OF SECTION 33, TOWNSHIP 16 SOUTH,
RANGE 37 EAST, LEA COUNTY, NEW MEXICO
IN THE SHIPP-STRAWN OIL POOL, TO BE
DEDICATED TO THE E/2 SW/4 OF SAID SECTION.

FILED

JUN 27 1989

OIL CONSERVATION DIV.
SANTA FE

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on July 16, 1987, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 9th day of September, 1987, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law and the applicant having provided notice to all interested parties as required by Rule 1207, as amended, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Amerind Oil Company ("Amerind") seeks an except Shipp-Str Regulations for the
Shipp-Str as amende Mike: vision Order No. R-8062,
its Meyer IN view of oil well location for
South lin This Amerind ation 330 feet from the
Township order, I don't t line of Section 33,
of said S Know how R-8951 to dedicate the E/2 SW/4

(3) Shipp-Str
R-8062-A,

was issued
Tom

ations governing the
Division Order No.
1 spacing units with

wells to be located no further than 150 feet from the center of a governmental quarter-quarter section or lot.

(4) Amerind seeks to drill its Meyers Well No. 3 at an unorthodox location in order to reduce the risk of drilling a dry hole or marginal well caused by the abrupt termination of porosity in this type of oil accumulation.

(5) At the time of the hearing, Pennzoil, Tipperary and W. A. Moncrief, Jr., who are interest owners in the south offsetting acreage, appeared and objected to the proposed unorthodox location.

(6) The Shipp-Strawn pool consists of a series of isolated pools, or porous and permeable algal mounds of limited area bounded by facies changes into tight limestone.

(7) There is conflicting testimony as to the ability of seismic techniques to accurately define the reservoir limits.

(8) Depending on interpretation, the pool presently contains either three wells or four wells. - The disputed well was recompleted in another formation after producing 19,647 barrels of oil from the Strawn.

(9) Exhibits presented by both sides utilized conventional structure and Isopach contouring techniques in attempting to portray the geometry and porosity distribution of the Strawn reservoir but the development history in the area has shown that the exact size and shape of the algal mound reservoirs are highly interpretative even after drilling.

(10) Expert witness testimony and historical evidence has established the inaccuracies of geological and geophysical projections from producing proration units into undeveloped offsetting acreage thereby casting extreme doubt on penalty formulas derived from exhibits which portray net acre feet of pay and productive acreage.

(11) The evidence established that the original pressure in the Strawn in this area was approximately 4000 psi which is slightly underpressured for the depth but the original pressure in this pool was 2571 psi indicating possible regional pressure depletion originating outside the pool.

(12) Protestants contend that reserves under the drilling and proration unit for this well are inadequate to pay for the well and that a penalty must be imposed to prevent

drainage from their lease in Section 4, Township 17 South, Range 37 East.

(13) The evidence established that allowing the proposed Amerind well to produce without a penalty would permit Amerind to produce more than their share from the reservoir thereby violating the correlative rights of other operators in the pool.

(14) Several methods have been used in the past to determine allowable penalties to be assessed to wells drilled at unorthodox locations, including encroachment drainage circles (double circle), the ratio of productive acreage to the acreage of a standard unit, the ratio of productive acre feet of one tract to another, the ratio of distance to the unit boundary from the proposed location and from the nearest standard location, and combinations of such methods.

(15) Protestant recommended a combination of "productive acreage" and the "double circle" methods to arrive at a penalty of 83% or an allowable of 17% of a normal unit allowable; or as an alternative, a penalty based on acre-feet of pay under the subject tract compared to average acre-feet of pay under the three other pool tracts which calculate to be 9% of the well's normal allowable.

(16) The double circle procedure can be used with reasonable precision but this method does not adequately protect the correlative rights of offset operators in this reservoir. It understates the penalty by granting a substantial allowable even to a well drilled on the proration unit boundary.

(17) The ratio of productive acreage and the ratio of net acre-feet is subject to geological interpretation which the historical evidence has shown to be unreliable and incapable of accurate resolution prior to drilling.

(18) The ratio of distances from the unit boundary can be readily and precisely determined on the surface or with directional surveys at the bottom of the well.

(19) Uniform spacing would require wells to be drilled in the center of the spacing unit, or in the case of rectangular units, in the center of alternative halves of units, but such rigid requirements often cannot reasonably or economically be met because of the placement of roads, surface obstructions or topography so that exceptions are required; consequently tolerance is granted to allow operators flexibility in coping with these problems.

(20) Tolerance distances are authorized for flexibility in drilling wells near the center of units and are a form of minor encroachment which the Commission does not penalize. They are not designed to gain geologic advantage; therefore, any penalty assessed for an unorthodox location should be based on a location in the center of the unit or standard location area.

(21) Application for an unorthodox location creates a presumption that the proration unit is not entirely productive or that applicant is seeking a geologic advantage, or both, and such presumption must be overcome to avoid a penalized allowable.

(22) Testimony established that there is a strong tendency for the drill bit to drift northward in this area which in this case is away from the common lease line; however, applicant volunteered, and protestants requested that applicant be required to run a directional survey on this well.

(23) In order to permit applicant the opportunity to recover his share of the oil in the Shipp-Strawn pool underlying his tract, applicant should be permitted to drill its well at the proposed location but the allowable for said well should be penalized to that proportion of the top unit allowable that the distance of the well from the lease line bears to the distance of the lease line from the center of the quarter-quarter section, or 660 feet, and that such distance shall be determined at the top perforation in the well provided there is no dispute on the accuracy of the directional survey; otherwise, the distance should be determined at ground level.

(24) Since the south line is the only line being crowded in this application, no penalty is required for encroachment in other directions.

(25) Granting of this application with a penalized allowable will prevent waste, protect correlative rights and permit applicant the opportunity to recover his just and equitable share of the reserves from the Shipp-Strawn pool underlying his tract.

IT IS THEREFORE ORDERED THAT:

(1) Applicant, Amerind Oil Co., is hereby authorized to drill its Meyers Well No. 3 at a location 330 feet from the South line and 1980 feet from the West line of Section 33,

Case No. 9143
Order No. R-8508

Township 16 South, Range 37 East, NMPM, Lea County, New Mexico and to complete said well in the Shipp-Strawn Pool, the E/2 SW/4 of said Section 33 to be dedicated to said well.

(2) Applicant shall run a directional survey in said well either on a continuous recording or at points not more than 500 feet apart to the base of salt and not more than 250 feet apart thereafter, and shall file a copy of said survey with the Division's Hobbs District Office and with the offset operator, Tipperary-Pennzoil-Moncrief within 15 days after setting the production casing.

(3) The allowable for said well shall be that proportion of the top unit allowable which the distance from the well to the south line of Section 33 bears to the distance from the center of the SE/4 SW/4 of said Section 33; said distance to be determined at the top perforation of the well in the Strawn formation; provided, in the event of survey failure, or if there is a dispute as to the accuracy of the survey such penalty shall be based on the said distance determined on the surface which would be $330/660 = 50\% \times 445 = 223$ BOPD.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

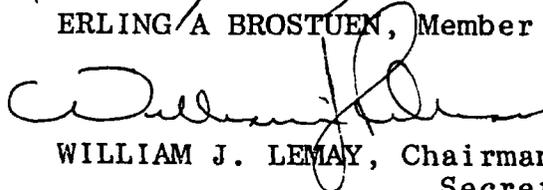
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM R. HUMPHRIES, Member



ERLING A BROSTUEN, Member



WILLIAM J. LEMAY, Chairman and
Secretary

S E A L